The Journal
OF THE
Jamaica Agricultural Society.

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BOARD OF MANAGEMENT.

THE usual monthly meeting of the Board of Management of the Jamaica Agricultural Society was held at the office of the Society, No. 11 North Parade, Kingston, on Thursday, 20th January, 1910, at 11.40 a.m. Present: His Excellency Sir Sydney Olivier, K.C.M.G., presiding, His Grace the Archbishop, Hons. L. J. Bertram, H. H. Cousins, George McGrath, R. P. Simmonds, Messrs. D. Campbell, R. Craig, A. W. Douet, A. C. L. Martin, J. R. Williams, and the Secretary, Jno. Barclay.

Minutes. The minutes of the last meeting having been printed and circulated, were taken as read and confirmed.

The following matters arising out of the previous minutes were considered :—

(a) Railway Freights. The Secretary said that as requested by the Board, the proposed revised Railway traffic freights had been submitted. These showed an increase between Old Harbour and Kingston, but a general decrease along the rest of the line. He was directed to circulate the papers to the Staple and Minor Products Committee.

(b) Importation of Bees. The Secretary submitted the result of his inquiries into the matter of the danger of introducing Foul Brood into the Colony by imported bees. He read letters from Messrs A. I. Root, Indiana, Ohio, U.S.A., with whom he had communicated for information, as follows :—

Dear Sir,—Referring to your letter of November 17th, in regard to the matter of excluding colonies of bees from the Island to prevent the disease known as foul brood, we beg to suggest that you will be wise to admit queen bees through the mails. There is no likelihood that a queen, even from a badly infected colony, would carry the foul brood or any other disease to another hive, unless it were bee-paralysis. There is no authenticated case where a queen has been the medium of transmission of either American or European foul brood. Chesire claimed to have found *bacillus alvei* in the ovary of the queen, but in view of late bacteriological work in the Bureau of Entomology, it is very doubtful if *bacillus alvei* is responsible for either American or European foul brood. In view of the fact that neither of these diseases have ever been communicated through the queen, we think that you would be running very little risk to let them come into the Island. We would advise, however, as additional precaution, that all queen bees upon entrance into your country, be immediately re-caged on to fresh candy with an entirely new escort. This, we are sure, would be all the precaution you would need to take.

In this connection we may say that bees in pound packages could be shipped into your country without danger to your own; but owing to the fact that bees without combs cannot go but a short distance comparatively, it is probable that no bees in pound packages could ever be delivered alive in Jamaica from the mainland. We would, however, admit bees in pound packages, so that in case it should be found desirable and feasible to ship bees in that form into your country, there would be no unnecessary restrictions.

In the Hawaiian Islands there is a foolish restriction on the importation of queen bees that practically amounts to actual prohibition, in that it is required that queen bees on arrival must be detained for a period of ten days or such a matter to see whether any disease would develop. Of course, the queen dies, if she arrives in a feeble condition, as she generally does after a long journey.

The reason why we would recommend the admission of pound packages of bees is because every such package is treated practically to the *McEvoy treatment, which will cure either American or European* foul brood. This treatment, as you are aware, shakes the bees off every infected comb and placed them on foundation. Bees in pound packages are shaken off the combs that are supposed to be healthy, but if they were diseased they would soon consume all the infected honey in their honey-sacs and would be incapable of carrying the disease on arrival at destination.—Yours truly, (Sgd.) E. R. ROOT.

Dear Sir,—Referring to your letter of December 17th, will state that the infection of foul brood can be carried in a queen-cage candy, and that is the reason why we recommend re-caging all queens. The foul brood germs will reside in the honey. A bee-candy is usually made by mixing honey and powdered cane sugar and kneading the same into a stiff dough. If the honey were infected, of course there would be a chance to convey it to the worker bees and the queen; but if the queen is kept caged in another cage for 24 hours or 48 hours, there will be almost no possibility of transmitting any infection.

While the bees may carry the infection on their bodies, that infection seems to disappear if the bees or queen are put in entirely different quarters.

There is a disease known as bee-paralysis, that might be carried through the queen, but this is nothing very serious, and only on rare occasions does it cause any difficulty in handling it.

In this connection, perhaps you would like to get the opinion of Dr. E. F. Phillips of the Bureau of Entomology, Washington, D.C. It is my judgment that his opinion will coincide very largely with what I have written and am now writing.—Yours truly, E. R. ROOT.

It was resolved to ask the Government to prohibit the importation of all bees, used hives, or used combs, with the exception of queen bees and their attendants; that anyone desiring to import queens should give notice to the Director of Agriculture of their intention to import, and that the queens imported should be addressed to his care, when a fresh escort and bee-candy would be furnished for the queen bee and the imported ones destroyed.

(c) Pound Laws. The Secretary submitted the opinions of various Parochial Boards on the working of the Pound Laws. These were directed to be circulated to the Live Stock Committee.

(d) Seeds and Plants Distribution. The following letter from the C.S.O. was submitted:—

Sir,—I am directed by the Governor to acknowlege the receipt your letter No. 5432 of the 17th instant, and to ask that the Jamaica Agricultural Society would be so good as to make arrangements as proposed

for supplying beans, seed corn, Irish potatoes, etc., and an Instructor for the people in the Port Royal Mountains and neighbourhood who have suffered by the recent flood rains.

2. I am to add that His Excellency will be prepared to authorise the refund from general revenue, of any expenses the Society may think it necessary to incur for seeds, plants and instruction. I am to ask that an estimate of the cost of these arrangements may be furnished.—(Sgd.)

The Secretary said he had submitted a detailed statement of £50 for seeds and plants and £10 for special instruction.

The Director of Agriculture said the Instructor for the district, Mr. Briscoe, could best supervise the distribution and see that the seeds were utilised in the way desired. He could arrange to devote about two weeks to this duty.

The Secretary was directed to make arrangements to supply the necessary seeds and plants and co-operate with the Instructor for the district.

(e) **Exhibitions.** The following letter from the C.S.O. was submitted, No. 96/16419, of date 16th January, 1910 :—

Sir.—I am directed by the Governor to acknowledge the receipt of your letter No. 5435, dated 17th ultimo ; on the subject of the Exhibitions to be held this year in Toronto and in London.

2. With regard to the Japan-British Exhibition, to be held in London, I am to refer you to the letter from this office, No. 6835/7951/09, dated the 3rd of July last, enclosing a copy of a letter from the Commissioner General inviting this Government to participate in the Exhibition, together with a copy of the letter sent from this office in reply thereto, in which the Commissioner General was informed that no appropriation from public funds could be made to secure the representation of this colony at the proposed Exhibition.

3. With regard to the Exhibition to be held in Toronto, I am to say that His Excellency is prepared to consider the question of this Island being represented thereat and he would be glad if the Jamaica Agricultural Society would be so good as to make recommendations in the matter and submit an estimate of the expenditure that it may be considered necessary to incur for such representation.

C.S.O., No. 912/729, 29th January, 1910.

In continuation of the letter from this office, No. 96/16419, dated the 6th instant, I am directed by the Governor to forward for the consideration of the Jamaica Agricultural Society, the accompanying copy of a letter, with enclosures, from the Commissioner of Agriculture for the West Indies, suggesting that Jamaica should be represented at the Canadian Exhibition to be held at Toronto this year.—(Sgd.) P. C. Cork, Colonial Secretary.

From the Commissioner of Agriculture for the West Indies to the Colonial Secretary.

Imperial Department of Agriculture for the West Indies, Barbados, 3rd Januuary, 1910.

Sir.—I have the honour to enclose, herewith, copy of a letter from Messrs. Pickford & Black covering a copy of a letter which they have addressed to the Merchants' Exchange, Kingston, on the subject of the representation of Jamaica at the Canadian Exhibitions to be held during the ensuing year.

It appears to me desirable that in view of the efforts at present being make to extend the trade relations between Canada and the West Indies,

the West Indian Islands should be fully represented at these Exhibitions. I would, therefore, suggest that you might forward this correspondence for the consideration of the Permanent Exhibition Committee and I would express the hope that after giving the matter careful consideration, it may be possible to arrange to forward a set of exhibits from Jamaica.—(Sgd.) FRANCIS WATTS, Commissioner of Agriculture for the West Indies.

Messrs. Pickford & Black to Commissioner of Agriculture for the West Indies.

Halifax, N.S., December 10th, 1909.

Dear Sir,—Herewith please find copy of a letter which we have written to Mr. Ashenheim, Secretary of the Merchants' Exchange, Kingston, Jamaica, in connection with the West India Exhibition for Canada next year.

If we are to fill the space allotted to us it will be necessary to have Jamaica as well as all the other colonies represented, and we would ask you to kindly do all you can to bring Jamaica into line.—PICKFORD & BLACK, per (Sgd.) C. S. PICKFORD.

Messrs. Pickford & Black to Secretary Merchants' Exchange, Jamaica.

Halifax, N.S., December 9th, 1909.

Mr. Ashenheim, Merchants' Exchange, Kingston, Jamaica.

Dear Sir.—The British West Indies have for the last few years been sending exhibits to the big fair at Toronto in August and September and we have been given for this purpose next year increased space and are working to make as big an exhibit as possible; heretofore we have been unable to get your Island to join with the others but are in hopes that we will succeed next year. The show at Toronto is a big affair, running for two weeks and having as much as 140,000 paid admissions on one day. The West India Exhibit always attracts a large crowd and we think, does a lot of good in encouraging trade between Canada and the West Indies, and we also feel quite sure that Jamaica would benefit very much. Goods would be carried by our boats from Jamaica to Halifax free and the only expense your Island would be put to would be Railway freight between Halifax and Toronto and expense of putting up stands; we taking entire charge of exhibit without any cost to West Indies and total cost to Jamaica would probably not exceed $150.00. We are very anxious to make a big show from the West Indies next year and would ask you to do anything you can to further this end. Exhibits would have to be in Halifax about the middle of August, but of this we would advise you later; fruit of course, could come at the last minute and be forwarded by express from Halifax. Hoping to hear from you favourably, yours very truly, PICKFORD & BLACK, per (Sgd.) C. S. PICKFORD.

The Secretary was directed to refer this to the Exhibitions Committee with information as to representation at previous Exhibition.

Trade Relations with Canada. The Secretary submitted the following letters:

(1) From the C.S.O., No. 12294/S.S.398/09, 15th December, 1909.

I am directed by the Governor to state for the information of the Jamaica Agricultural Society, that the Royal Commission on Trade Relations between Canada and the West Indies will shortly visit Jamaica.

2. In accordance with the desire of the Commissioners, I am to invite the Jamaica Agricultural Society to prepare a statement on the lines indicated in the accompanying Form A, furnished by the Commissioners, and to nominate one or more representatives to present it to the Commission. As the time which the Commission can allot to each Colony is necessarily limited, it is very desirable that such representatives should be fully authorised to speak on behalf of as many interests as possible.

3. I am to ask that the statement may be furnished in duplicate and forwarded to me, if possible, not later than the 31st instant.

I am to invite attention to the notification in the *Gazette* No. 568, dated 15th instant.—(Sgd.) P. C. CORK, Colonial Secretary.

No. 35/S.S.413/09, 4th January, 1910.

In continuation of the letter from this office, No. 12294/S.S.398/09, of the 15th December, 1909, I am directed by the Governor to acquaint you for the information of the Jamaica Agricultural Society, that the Royal Commissioners on Trade Relations between Canada and the West Indies, are expected to arrive in this Island on the 27th instant and to leave on the 4th February.

Applications from persons wishing to give evidence, should be addressed to the Colonial Secretary not later than the 12th instant. All statements received by that date will be sent to the Commissioners at New York for consideration before their arrival in Jamaica.

A notification to this effect was inserted in the *Gazette* of the 30th ultimo.—(Sgd.) P. C. CORK, Colonial Secretary.

No. 433/S.S.430/09, 14th January, 1910.

I am directed by the Governor to forward to you the accompanying copy of the minutes of the evidence taken in Canada by the Royal Commission on Trade Relations between Canada and the West Indies, with appendices.—(Sgd.) P. C. CORK, Colonial Secretary.

(2) West India Committee.

11th December, 1909.

I have the honour, by direction of my Committee, to transmit herewith a copy of a resolution on the subject of preferential trade between the British West Indies and British Guiana and the Dominion of Canada, which was moved by Mr. Charles Sanbach Parker, seconded by Mr. Arthur N. Lubbock and adopted unanimously at a meeting of my Executive on Thursday, December 9th.—(Sgd.) ALGERNON E. ASPINALL, Secretary.

Whereas at a meeting of the Executive of the West India Committee held on July 30th, 1908, it was resolved :—"That this Committee, being of opinion that every effort should be made for closer industrial and trading intercourse between the Dominion of Canada and the West Indies, would regard with satisfaction and hopeful interest any initiative towards the above objects which might be taken by the Legislatures of those Colonies."

And whereas a Royal Commission is at present sitting to investigate and report upon the measures which may be taken for the promotion of closer trade relations and for the development of mutual trading facilities between the Dominion of Canada and the British West Indies and British Guiana.

And whereas the Legislatures of Barbados, British Guiana and the Leeward Islands have passed resolutions in favour of the establishment of a preferential trade arrangement with Canada.

And whereas the Agricultural and Commercial bodies in Antigua and St. Kitts and the Trinidad Chamber of Commerce have passed similar resolutions.

Be it resolved: (1) That the West India Committee are of opinion that a preferential trading arrangement between the British West Indies and British Guiana and the Dominion of Canada, offers the best prospects for the future welfare and prosperity of these colonies, provided that the interests of individual colonies be safeguarded.—(Sgd.) ALGERNON E. ASPINALL, Secretary.

As the matter had been already dealt with at the Half-yearly General Meeting, these communications were directed to be recorded in the minutes.

Mr. Williams suggested that the Board should advise the Com-

mittee that would appear before the Commission, as to the resolution that had been passed at the half-yearly meeting re better transport facilities between Canada and Jamaica.

Mr. Craig thought that if Canada wanted to get our trade she should put her hands in her own pockets.

His Excellency said it was a matter of increasing our trade relations with Canada.

Dr. Pringle thought that Canada was a country that we should cater for. He did not think that the benefits would be all on the side of Canada. He moved this resolution :—"That this Board favours the granting of a subsidy towards improved steamship communication with Canada."

Mr. Cousins seconded and the motion was carried, five gentlemen voting for it and two against.

Grants to Shows. The following applications for grants to Shows were submitted :—(a) Montpelier, on 3rd March; (b) Smithville, on 12th April; (c) Stewart Town, on 28th April. Grants to Smithville and Stewart Town were made under the usual conditions as all the rules had been followed, and these fell in the new financial year, but no grant could be made to Montpelier as the total amount allocated for Shows this year had already been allotted.

Montpelier Show also applied for the services of the Instructors, Mr. Cradwick for a week previous to the Show, and for Mr. Arnett and the General Secretary. The Instructors' Committee, to whom this application had been referred, granted permission for Mr. Cradwick to attend the Show for three days and for Mr. Arnett for the same time provided the latter's expenses were paid. The Secretary was also instructed to give his services if he could arrange.

The matter of the extent of Instructor's services at Shows should be called upon, and rules for governing their attendance and duties were referred to the Shows Committee.

Prize Holdings Competition. The Secretary stated that the awards of the Judges in St. Catherine were then in preparation and would be submitted to the next meeting.

A resolution from Fair Prospect Branch asking for the addition of a special class under one acre, was referred for consideration later with the resolutions from other Branches on the same subject.

Application for Affiliation. An application for affiliation from the Avocat Agricultural Society lately formed, was granted.

The Instructors' reports and Itineraries and the Secretary's reports of visits, were directed to be circulated to the Instructors' Committee.

New Members. The following new members were elected :—W. V. Garriques, Kingston; W. A. McLelland, Kingston; W. M. Walcott, Canada; J. N. Vickridge, Hope P.O.; Messrs. C. Kersten & Co., Dutch Guiana, South America; S. A. Lord, Guelph, Canada.

The meeting adjourned till 17th February, 1910.

HINTS TO EXHIBITORS AT SHOWS.

BY JOHN BARCLAY.

AGRICULTURAL PRODUCTS.

THESE are often mis-named Minor Products, but this is a wrong term, for Bananas, Oranges, Cacao (Chocolate), Coffee, Coconuts, etc., are not minor products; they are important staple products. The term "Agricultural Products Section" should be used. In this section also are shewn exhibits of Handicrafts, Ladies' Work, and School Work. Every Show List should demand that these must be grown, made, or produced in Jamaica by the Exhibitor, and so it is a disqualification if any exhibitor buys stuff simply to show it.

Citrus Fruit.—The Show List usually asks for Oranges and Grape Fruit and sometimes Tangierines and Lemons,—one dozen. These should not be brought to the Show loose, as they cannot be exhibited all in that way; the various exhibits get mixed and roll over or off the benches. It is quite easy to bring them in a tray or a neat box, stem cut, and nicely cleaned and polished, or leave enough of the stem to tie the six together. In the same way lemons and limes are better brought in a tray or pan; they should not be exhibited loose. If exhibits of these fruits are brought of the same size, as large as possible, and without scale or smut, they would have a better chance of winning the prize. In the case of packed fruit, the proper regulation boxes for shipping must be used, and proper wrapping paper—tissue paper for oranges, straw or tissue paper for grape fruit,—and the fruit must be properly cured and properly packed according to sizes.

At the same time Citrus Fruit is judged by the quality of the inside of the fruit, as well as the outside, and a smaller sized, clean, smooth-skinned fruit, having a delicate, juicy pulp, would be considered better than a large-sized, coarse-skinned orange, with thick pith inside and watery flavour.

Show Lists might have a rule as follows:—Citrus Fruit when not exhibited in a box, must be fastened neatly together, and for this purpose part of the stem may be left.

Bananas.—In exhibiting bananas, the bunches should be brought just as they would be taken for shipment, with the terminal bud cut off, and they should, of course, have no bruises and no fingers broken off. Show Lists usually provide two separate classes for bananas; one for shipment to the United States, which usually means three-quarter-full fruit, and one for shipment to Great Britain, which usually means a bare three-quarter, according to the season of the year.

Prize Lists also usually provide a class for one hand of Ripe Bananas and Plantains. Care should be taken that in these exhibits the fingers are a golden yellow and have no bruises or black marks on them.

Pineapples.—Three or six of these are usually asked for, of two or three varieties. Care should be taken that there are different varieties brought to the Show, else the exhibit might be disqualified; and that the pines are not brought loose, but in a tray or box. They should have the slips at the base of the roots taken off and the stems trimmed to an inch length, and the mealy bugs with which they are often infested at the base should be washed off. The crowns should not be trimmed in any way.

Vegetables.—In the vegetable section it is very annoying to those who have to arrange the exhibits and those who judge them, that Chochos, Cucumbers, Garden Eggs, Pears, etc., are put down loose; they roll about and the exhibits cannot be kept properly apart. Cabbages should be brought in a tray; Chochos can be exhibited in a large pudding pan or tray, so can Cucumbers and Garden Eggs, and Avocado Pears should be brought in a tray or box. But where exhibitors are bringing many things, they would require to use many trays and pans, so Show Committees should provide two or three quart size of pudding pans or fit the Show benches with divisions (light wooden frames made and ready do) to hold exhibits like Coconuts, Pears, Grapefruit, Potatoes, etc., and corn cobs that are apt to roll. All these articles should be as near the same size as possible. Tomatoes should be rich coloured and not have worm marks or any rot on them, but should be clear-skinned and perfect, and all as near the same size as possible, unless two varieties are exhibited, when three of each variety of the same size could be exhibited.

In the class for "Collection of Green Vegetables" the various kinds should be neatly arranged in a tray. This means vegetables like Cabbage, Indian Kale, Spinach, Lettuce, Cress, Parsley and such like.

In the class for "Collection of Root Vegetables," they should also be arranged in a tray or box, keeping the different kinds together. This means, Turnips, Carrots, Beet, Radish, Parsnip, etc., but not Ground Provisions.

In the section for Tubers, *i.e.*, Yams, Cocoes, Potatoes, Cassava, exhibitors, when they come to the sheds, should ask where they are to place these, as they are usually so heavy and bulky that it is not convenient to shift them to their proper places if they are put down anywhere; and they may get damaged. All these should have the dirt taken off them, and in the case of Yampies, Cocoes, and Potatoes, they should be exhibited in a box or tray so as to keep them together; otherwise the various exhibits are apt to get mixed.

Boxes of tacks are provided by the Show Committee to enable the exhibit tickets to be tacked on to these exhibits, as they do not lend themselves for tieing. Also short pieces of string for where tieing labels is necessary, and boxes of small pins and small safety pins for fastening labels on such exhibits as Fancy Work.

Cabbages—should not have the large covering leaves trimmed

off. but the outermost leaves may be taken off, so as to show off the head with good leaves.

Peas and Beans.—There are so many different varieties of peas and beans, that Prize Lists usually ask for only two or three special kinds, and then have a class for "Any Other Kind." There is great confusion among the classes for beans and peas, and the one is often entered for the other owing to things being called by wrong names. The most flagrant instance of this is the "Jamaica Red Pea," which is really a kidney bean and should be called "Red Beans" for distinction. Shows may do a good deal to correct such mistakes.

The various classes which *may* be entered as peas are :—Black Eye, Lady Pea (called also Quick Increase and Cockle's Increase), Congo Pea (Gungo or Pigeon Pea), No-eye and Cowpeas. And the following which are commonly grown should be entered as beans:—the common red kidney bean (usually called "Red Pea"), Speckled or Crab Eye, White and Yellow, all of which are kidney beans of different colours ; also Round Red, Round-so-full, Bonabis, Sugar, and the various Broad Beans.

Beans and Peas shown green in the pod, or as "Snap" beans, come in the Vegetable Section ; the dry beans in the "Grains" Section, and whatever is exhibited as "dry" Beans, Peas, Corn, etc., must be thoroughly cured, and fit for storing. Imperfect curing is a common defect in these exhibits.

Grains, Nuts, etc.—Coconuts should be exhibited in a tray, as, if brought loose they roll about ; the different exhibits are much alike and so they get mixed, to the annoyance of those who arrange them, the difficulty of judges and the disappointment and confusion of the owners when they come to see whether they have got prizes, or to claim their exhibits.

Much trouble is also caused in the class for "Cobs of Corn" in the same way ; they are brought loose and it is difficult to keep the exhibits together. They should be exhibited in a pan, box or tray. Corn in the cobs should be selected as for seed purposes,—should be as fine as possible and well-cured.

As regards Shelled Corn, Coffee, Cacao, Pimento, when a larger quantity than two quarts is asked for on a Prize List, the exhibits should be brought in a clean calico bag, and a quart or two quarts put into a pan as a sample and put down beside the bag. Pans or basins of one and two quarts capacity should always be supplied at Shows by the Committee according to quantities asked for. Two quarts, however, is generally sufficient to ask for, of any product.

Many mistakes are made in showing Cacao. Some of it is brought quite damp and heavy, some has been dried over the fire to make it light and crisp and has been done too much, so that the beans crumble to pieces when lightly crushed. In this case if it were shipped to a market a great deal of loss would take place on the way. The Cacao should not be merely dried, but should be fermented and then dried until it has a nice, crackly feeling when it is squeezed in

the hand, but not so crisp as to crumble to pieces readily, and it should be of a clear red-brown colour. When cacao is to be fermented it is better not to wash it. If small settlers do not mean to ferment their cacao but only dry it, then it is better to wash it to give it a better appearance.

In exhibiting Cacao-pods they should be brought in a tray or box so as to keep them together. They should of course, be brought quite fit and not unripe. It takes skill to recognise when they are exactly fit and this is known by the colour, according to the kind of pod, and by tapping—some men can tell by tapping the pod with their fingers. If the seeds shake loosely inside the pod they are too ripe; the seed should just be heard to move when shaken and no more, when they are picked from the tree,—that is for seed purposes.

In the class for "Prepared Cacao made up in Cakes or Sticks," the judging goes by the colour, fineness, evenness of texture and by the taste and smell. Some are very dark, almost black, and so are not attractive looking—these will not get a prize if there are any nicer there. Others are not finely ground, so that when being prepared they would take more boiling than if very finely ground, and probably the virtue of the chocolate would not be got out of them. The chocolate should be ground or beaten as fine as possible, and the sticks should be made smooth and round, and they should have a nice chocolate flavour and smell. No colouring or flavouring should be used, not even sugar.

In the class for "Kola Pods," these should be exhibited in a box, or tray, or pan, and should be as nearly as possible of the same size and as large as possible.

In "Kola Powder," the judging, like chocolate, goes much by the fineness of the powder—coarse powder takes longer to dissolve and without long boiling the virtue is not got out of it. The colour can vary from a dull brown to a yellow-brown. The powder should also have the proper smell and flavour and any other smell or flavour through the admixture of anything will disqualify it.

(*To be continued*).

CATTLE WASHES AND DIPS.

EXTRACT FROM REPORTS OF THE LIVERPOOL SCHOOL OF TROPICAL MEDICINE, RE JAMAICA, 1908-1909, BY ROBERT NEWSTEAD, M.SC., A.L.S., ETC.

WILLIAMS, in his official report, recommended as the cheapest and most reliable dressing for cattle ticks: "One pint of tar to three pints of boiled linseed oil, to be applied to all parts of the tick-infested skin," and added that "if one dressing be not sufficient a second should be applied in a few days." This formula, with various complicated notifications, has been in more or less general use for the last thirteen years. That this mixture or a modification of it is effective *as a local application* cannot be denied, but it is much

too drastic in its effect upon cattle to be of any real service in the treatment of tick-infested animals.

There are also numerous other forms of washes in use, many of them prepared from materials which the settler may have at hand, but these, for the most part, are altogether too complicated and, in many instances, also too costly to be applied on a large scale.

Several proprietary washes and dips are also used ; and in many instances with satisfactory results. In the series of experiments which were conducted by us at the Government Laboratory, some of the more popular of these were tested, by spraying a number of tick-infested cattle. The results obtained gave a percentage of dead ticks varying from five per cent. to sixty-five per cent.

After prolonged experiments a most effective spraying wash has been evolved, consisting of a mixture of Cooper's "Dip Powder" and Cousin's "Paranaph." The former is a most effective preparation when used as a dip, but was not found sufficiently mobile to use as a spraying mixture, as it does not readily penetrate to the skin, especially in long-coated animals, and this was particularly noted in a young calf which was used for experimental purposes. Cousin's Paranaph is also a proprietary article, consisting of soap-paraffin and naphthaline, devised originally for washing hops and fruit trees in Kent. The proportions of Cooper's Dip used by us is the minimum strength recommended for use in dipping sheep and cattle; but in South Africa, where the "Bont Tick" (*Amblyomma hebraeum*) is very difficult to kill, the powder is used with safety half as strong again. The "Silver Tick" of Jamaica (*A cajanense*), though closely allied to the Bont Tick, does not appear to be so tenacious of life as its African relative. Realising the difficulty of obtaining the exact nature of the result of this compound upon "Grass Lice," which from their minute size, are rendered almost invisible among the hair of their host, control experiments were made by placing masses of the young lice in muslin bags. These were completely immersed in the dip and afterwards suspended in the open air in a cool place and allowed to dry. Eighteen hours afterwards the "lice" were found still living but on the third day every tick was dead ; so that we may justly claim that this preparation is equally effective for all stages of cattle ticks. The exact formula of this wash is here given : Paranaph, one part, water six parts ; Cooper's Dip, one packet to twenty gallons of water. One and a half quarts per head seems quite enough if applied properly. This preparation has proved not only effective in its immediate results, but a most persistent and adherent tick-destroying medium. The cattle which were sprayed by us, although left to graze in pasturage which was positively alive with "Grass Lice" for a period of five weeks, had at the end of that time scarcely a live tick upon them. We are sanguine, therefore, that the tick problem in Jamaica can be controlled cheaply and effectively with appliances readily obtainable and usable by any owner of stock ; but the following conditions should be rigorously adhered to in spraying or washing cattle :—

(1) The application of this mixture, which contains Poison, must not under any condition, be applied at a less interval than fourteen days: and in our experience every five to eight weeks during the winter months is sufficient to keep the cattle practically free of ticks.

(2) All sprayings or washings should take place in the early morning: and the cattle should be allowed to dry in the shade before turning out to graze.

(3) If cattle have to be driven for any distance they should be allowed to cool before spraying. Driving both before and after should be quiet.

(4) Cattle of all ages and also cows in calf may be sprayed. Cows in milk should have the lower portions of their udders sponged before milking on the first day of the spraying.

(5) The spray should be so finely distributed that practically none of the liquid drops off the animals treated. To avoid danger the operation should be conducted on a site devoid of grass.

(6) All waste products and washings from the apparatus used should be thrown into the drains, or safer still, into a hole in the ground and covered with a layer of soil.

(7) All these instructions are applicable both for dipping as well as for spraying. *But in-calf animals should not be dipped a month or so before calving.*

We have every confidence in recommending this preparation which, although containing *arsenic*, is perfectly safe. The cattle treated by us did not suffer in the least; moreover, Cooper's Dip and other arsenical preparations, have been in use for several years in Africa, Australia and South America, and although thousands of cattle have been put to the test in all of these countries, no loss has been occasioned when the regulations for its use have been strictly carried out.

THE CURING OF COFFEE.

When we plant and do not realize our expectation in an abundant crop, it is very often our own fault. It may be we did not do our part well. It seems to me that in agriculture, as in all things else, the results are as a rule, proportionate to the labour and care expended. If we sow sparingly we shall reap sparingly, and if we even sow abundantly and fail to second that effort with due care of the things sown, or rather planted as is the case with us, we should not be disappointed when our reaping is small. In all such matters man has his fair share of work, and the rest God will unmistakably perform. St. Paul in a figure of speech taken from agriculture says: "I have planted, Apollos watered, but God gave the increase."

In Eastern countries, it is not sufficient to plant only, but it is necessary to water or irrigate the land. In Egypt where rain seldom

falls, there are thousands of machines with which to water the fields, and in spite of this disadvantage they raise abundant crops of wheat, and other grains, cotton, hemp, tobacco, coffee, sugar, and now they are turning their attention to banana growing. On these mountains where rain falls with unfailing regularity, we need good drainage and wide planting in the low-lying portions.

At the advent of the first settlers in these parts, the land was virgin, and the centuries that must have passed over it under dense forest, had caused a deep layer of vegetable matter of every sort to be formed, which the fire-stick in the first instance and successive crops afterwards have greatly diminished. Now the soil is rich or poor as it contains a due amount of vegetable matter, or is deficient in it. You must therefore expect these lands to be getting poorer and less capable of yielding the former returns as the years go by and the method of cultivation in vogue continues. The lands from which crops have from time to time been raised need manure, or in other words, we need to add food to the soil for the growing crops to feed upon.

As one passes through these districts there is an apparent neglect of coffee cultivation. Since the low prices which are due to the great amount of coffee produced all over the tropical world, many persons have become discouraged, and have either partially or entirely thrown up their coffee fields. This is most unwise, for however small the price may be coffee is ready money. You cannot have coffee and be hard up for money. You may not find a purchaser for a cow, or a mule, or a horse, when you want to turn any one of these into cash, but it is not so with coffee; and the money you make out of the coffee this year, you can with proper management make all the years of your life. When you have once sold a cow or a horse it is gone for ever. Once established and regularly manured, the coffee trees will yield greater crops year by year. It is a most long-lived plant, whose size and yield (soil and seasons being favourable) increases with years.

It is rather sad to see the quantity of land that was once covered with flourishing coffee in ruinate. Ruinate is an English word that is not used in exactly the same sense in which we use it. Originally it meant—to reduce to poverty, but as it is now used in England and the United States of America, it means to destroy. According to the original meaning of the word, if you allow your once flourishing coffee piece to lapse into "ruinate," you will be reducing yourself to poverty. But taking the present-day meaning of the word, you demolish or destroy your coffee trees, when from neglect they die and their place taken by useless weeds and bushes. Coffee comes in just when we need some money most—about Christmas, and in that nick of time there is no other produce to substitute it. Besides, there are very few Jamaicans that are not coffee-drinkers, and you know how embarrassed you are when the supply you reserve has run short. From all these considerations it seems to me suicidal to neglect so valuable and useful a product. Let us see, firstly, as peasant proprietors, how best we can cultivate the coffee so that from plant-

ing till the trees come into bearing, the labour (for such only it is to people who do all the work themselves) may fall incidentally to the coffee.

The preparation of the soil is of great importance to any form of cultivation. The lands we have to deal with now are for the most part what are popularly known in Jamaica as ruinate lands, which were at some late period under cultivation, but to use the old meaning, has been reduced to poverty through neglect; not because they can yield their owners nothing, but because they are left to themselves and they produce nothing but bush. Such lands can be made to bloom again as the Garden of Eden, if with energy we set to work in the right manner. I shall briefly tell you from the theoretical standpoint as well as from practical knowledge, how I proceed, and excuse me this boast, when I say that no man can tell you that I have not succeeded admirably.

I select a piece of land, and if it is ruinate, I have it carefully weeded some time before I am ready to plant—say two or three months before. All the weeds and bushes are allowed to rot there, but no fire is allowed to pass over such a land, for such a process would further reduce the land and myself to poverty. To hasten the decay of the rubbish it is good to turn animals on the land to trample it and whatever remains of what you feed to them, besides adding their quota to its fertility by their droppings. Next the land is lined six or eight feet apart, according as it is a slope or a flat, for the coffee, and holes dug a foot deep and eighteen to twenty-four inches wide at every peg. I am very careful to let my lines cross at right angles, and it is just where these lines cross that a peg is placed and the hole afterwards dug. If I do not fill the holes immediately with manure, I leave them open till I am ready to plant the coffee. By this time there will be a lot of surface soil and half-decayed leaves washed into the holes and therefore much prepared food ready for the seedlings to take up and start growing vigorously.

Hills for yams can now be dug and these too should be in straight rows and at equal distances from one another. This is of great advantage if you wish a good return; for apart from the nice appearance of the field, you will get in more hills, and each plant will have its full share of air and sunlight Set your yam poles just near a coffee hole, so that when the coffee plants are set out the yams may form shade for them. Do not allow the plants of two hills to twine round one pole, except it is very tall or has many branches. The reason for this is that the plant gathers more food from the air than from the soil, and it takes its food from the air through its leaves. If therefore, the leaves crowd together too much on a pole, the outer leaves only will get air and so gather material to build up the yam in the hill. You will have noticed that the taller the pole around which the yam twines, the larger it bears and the longer it takes to ripen or mature. This is owing to the fact that the leaves are distributed over a great space and each has a chance to play its part in feeding the plant. You will have noticed too that when the leaves crowd too much on the pole, the inner

leaves from lack of air and sunshine turn yellow and fall off. The plant throws them off because they are of no use to it. Every hill of yam planted should be filled with some growing weed such as leaf of life, which is the best for that purpose, or water grass or Spanish Needle, and then the whole field covered over or mulched heavily with guinea grass, pimento leaves or bush of any sort. The branches of the male pimento can be lopped off and used in the mulching of your fields, as well as the trash after you have gathered the berries. I have used all sorts of grass and bush in mulching but none has given results equal to pimento. Yellow yams especially bear to astonish you when thus treated and the coffee grows rapidly.

But having holed the land for the coffee and planted your yams and mulched the soil, let us see to the planting of the coffee. The selection of plants is not a matter of little importance and the best way is to raise seedlings from the largest berries taken from the healthiest trees. But the plants from the "rat coffee" are not bad provided you take the plants from under the healthiest trees, for the rats in "cutting" the coffee select the largest berries—they being the most juicy.

The seedlings grow best when taken up with a ball of earth around the roots, and to do this lift them out of the nursery bed or from under the trees with an agricultural fork, so as not to break too many of the fibres feeding the plant. If the seedling is large, give the tap root a slant and smooth cut at its tip that it is placed in the hole without a jagged end, and incline the plant half-way from an upright position; press the soil firmly around the tap root, next have the other roots well spread out as they grew naturally and cover them with the nice, rich surface soil around. Do not press this last soil tightly and shut out the air. In three or four months a strong shoot should start from near the ground. This grows rapidly, and the old stem should be cut off close to the shoot when that is one foot high. If the seedling is small it should be placed perfectly upright in the hole and the tap root and other roots treated as above, but the hole should be only two-thirds or three-fourths filled. The months of April, September, October and November are the best in which to set out the plants. When four years old coffee that is well cared for begins to bear well. Seedlings eighteen inches and a foot high planted by me in well-forked and manured red soil, fruit in two years.

All these berries I strip off, and they are never allowed to remain to mature. The coffee bears in clusters on the branches at every node; and this is so exhausting to the young trees that in their effort to mature the berries, they first throw off the leaves and then the branches next begin to die from their tips to the trunk. This will make your coffee trees poor and sickly instead of being vigorous and strong to produce large crops with large berries of commercial value in future years. It is better to lose a little the first year and gain a great deal in the years following. Do not keep "long top" coffee. They mostly become tall, straggling stems with switchy branches. If the place is windy, top your coffee at the

height of four feet, but if it is a low-lying or sheltered field, top the trees at the height of five feet. In doing this first take off the terminal bud and then the two branches immediately below just at the first node next to the stem, the node itself being removed too. This will prevent the topmost pair of branches splitting the top of the stem which very often happens. You must now be on the watch to remove the shoots which will spring up just under the two cut branches at the top and later from almost under every branch. No secondary branches should be allowed to proceed from the first nodes of the branches, as these being next to the stem will take most of what should go into the main branches and in time crowd the stem and in time cut off both air and sunlight from it. The short coffee well kept has these advantages over the tall tree: it is less affected by high winds, the berries are easier gathered, it produces larger berries and the yield in quantity is greater. I like to see an orderly field and a field of short coffee shaded by well-trimmed banana trees or nicely-kept orange trees, presents an attractive appearance.

To keep up the vigour of the trees, there must be abundance of shade and constant manuring. To do effective manuring, get a piece of guinea grass planted, make a horse pen in the centre of the field with a shed in it on a bit of rising ground where your coffee trees may be puniest. Never mind the temporary loss of three or four trees. Feed the horse there always with the grass, "Spanish Needle" and corn top, and don't forget to groom him well. He will be the better horse for it in looks and the amount of work he will do. At stated periods clean out the pen and put all the matter in heaps in the coffee field, and in twelve months you will be proud of that field. You will also have a pig. Make a pen for him too in the field, but before you put him in get some grass of any sort, and put in about two feet depth of it. In two or three weeks it will be well trodden: repeat the treatment and at the end of two or three months remove the pen and thoroughly cover the old one with bush or better yet, earth. This pile will be a store of food for the trees some distance around. Thorough shading of the coffee trees is very essential to the health and vigour of the trees. The coffee is a hard wood and therefore removes much mineral matter from the soil, it will not thrive well where trees of a like nature are used as shade trees. The wood of the trumpet is not hard and would answer well if the leaves did not receive and pour the rain water too heavily on the coffee; besides when the leaves fall they lie on the coffee trees and harm them. The best shade tree is the banana. Nature has provided the leaves with a sort of gutter to lead the water to the trunk of the tree so that shade is afforded the coffee and the water is not poured upon it as is the case with the trumpet. The banana is also valuable in the home and will bring you money.

Let me emphasise what I have said about *mulching*. (1) It keeps the soil at a uniform temperature. (2) It prevents a heavy crop of weeds and thus lessens the labour of keeping the field clean, and coffee soon becomes sickly looking if the field is overrun with weeds. (3) Mulching conserves the moisture which you know the

coffee needs so much to perfect the berries. (4) The matter used as a mulch soon decays and yields food to the trees in more than one form.

Some persons may think all this too much trouble and work, but it must be borne in mind that no real good can come to us without much trouble. We have tried the old methods long now: it is time for us to improve them or abandon them for better ones while it is plainly seen that they are for our advantage. I am not recommending to you what I merely believe to be good, but what I have done myself and found to work admirably.

I am most enthusiastic in doing agricultural work and in watching the results. Do not believe that working in the field, or working at a trade is harder work than mental work; such work makes heavy demands on the physical powers only. The great writers and statesmen have laboured more than the miner, the engine driver or the common day labourer of any sort. Lord Macaulay tells us he read twenty books to write one sentence.—A. M. LEWISON.

Walderston P.O.

RUBBER.

WE have had some correspondence on the subject of rubber,—those who have planted are much concerned at the statement that has gone forth that rubber cannot pay in Jamaica. Some growers have cut some down and others are thinking of doing so, especially where they are planted through cocoa. It would not be well to remove the trees that are now growing through cocoa and bananas. "As rubber is not likely to prove a success in Jamaica according to the latest reports, what is the good of keeping the trees to the injury of the most important crop—cocoa?" is what one correspondent writes.

We are asked by readers what is the use of talking about rubber in the JOURNAL if it cannot be grown with success in Jamaica? Now no one knows that it cannot be grown with success in Jamaica, no one knows that it cannot be grown through cocoa and bananas with good financial results on the whole and no one knows that it can be grown; we have no specific data, but no country has ever planted any crop new to it that has not done it in a speculative way. There is no certainty in agricultural work; the first men who planted the banana here were not positive that it could be grown commercially, and no one dreamed that it would become the great and important crop that it has become. The opinions expressed that rubber cannot be grown here profitably are founded on analogy, and there is less data to go upon that rubber cannot be grown than that it can be grown. The men who first planted Para rubber in Ceylon, which has become such a gigantic success, had less data and less reason for their analogy to plant Para rubber there, than we have to plant Para and Castilloa rubber here. In the opinion expressed against rubber growing, it is stated that Jamaica is not tropical enough and is not moist enough to grow rubber, that is Para and Castilloa rubber, when our conditions are com-

pared with those of Brazil where Para grows and with Central America where Castilloa rubber grows. It is a mistake to suppose, however, that Para rubber is grown on the banks of the Amazon only. Facts concerning Para rubber that we have printed several times in this JOURNAL as written by Mr. H. A. Wickham, who first got the Para Rubber seeds for Kew which were sent to the East, will show this to be a fallacious opinion, and that Para rubber will grow and tap well from sea level up to 3,000 feet in the tropics, while we only plant in our lowlands, facts show that it will grow in a 40in. rainfall so long as the atmosphere is moist, while we are only planting it in the districts that have a rainfall from 60ins. to 150ins. Ceylon and the selvas of Brazil have poorer soil than we have in Jamaica, we grow rubber on good banana soil, yet as a matter of fact, it thrives even better on a different type of soil too poor to grow bananas, so long as there is a certain consistency. If we are tropical enough and humid enough to be the greatest banana-producing country in the world (taking size into account) to make banana-growing a commercial success from sea-level to 2,800 feet; if we are tropical enough to grow cocoa and coconuts successfully and profitably to such a large extent, we are not convinced by the argument that we are not tropical enough and not humid enough to grow Para and Castilloa rubber.

The opinions expressed by men, scientists, and practical men who have lived and had their being in rubber-growing districts in Ceylon and Southern India for many years, men who have made rubber-growing almost their chief study for many years are expressed in the book on Para Rubber written by Herbert Wright.

Herbert Wright was the Director of Agriculture in Ceylon, Mr. J. B. Carruthers, Assistant Director of Agriculture in Ceylon and afterwards Director of Agriculture in Malaya, but he is now Assistant Director of Agriculture in Trinidad. Mr. Herbert Wright is now editor of the *India Rubber World*; the other opinions expressed are those of practical planters who are not only growing rubber but exporting it. We may quote some of these experiences as to climate, varieties and yields in next JOURNAL. We are not certain in Jamaica what we can do or how our rubber will result, but drawing analogy from the experiences in the East, in the neighbouring islands of Haiti, Tobago and in Mexico (which has cooler and hotter and drier weather according to season, than Jamaica) and taking into account our latitude, our even island temperature, our fertility, our capacity for producing strictly tropical products like bananas, cocoa and coconuts, and our means of growing rubber trees cheaply through bananas as a covering crop, while planters in Mexico, Ceylon, and Malaya have to up-keep the rubber as their sole crop, we think the analogy quite comforting.

SMALL HOLDINGS COMPETITION.

RESOLUTIONS have been submitted from time to time from various Branch Societies asking for revision of some of the rules govern-

ing this competition. St. Thomas-ye-Vale Branch asked that the limit of size of holdings be extended from twenty acres to fifty acres. St. Faiths (Glengoffe) also asked that holdings be allowed to compete though in two separate pieces, provided the house is on one, and they conform to the rule, that they are by or near a parochial or main road, and are not over half a mile apart. Moore Town which is a Maroon district where the people live in a village, the lands around which are held in common, and who cultivate their own land outside the village, where of course, they have no residence, asked that exception to the house qualification be made in Maroon districts. All these matters have been given careful consideration, and the limit question as to size of holding, has also been submitted to the Branch Societies for the opinions of their members many of which are competitors. The Instructors have also been asked their opinions.

Districts differ so much that there are, as might be expected, quite different opinions expressed. In Southern and Middle St. Elizabeth for instance, holdings of *bona fide* small settlers are often large, because the district is subject to drought, stock-raising is the chief industry, so only a small proportion may be cultivated and the larger part held for grazing and growing guinea grass. In Portland on the other hand, there are many small holdings of an acre which are out of the running in the third class confined to holdings of five acres or under. They want a class there to suit such holdings. Then again, in some districts lands are often held in two or more separate pieces, the one purchased first where the residence is, and land purchased afterwards some distance away, and it is on the latter (usually larger than the first piece) where the catch crops are grown and stock are kept, the house piece having staple crops like coffee, cocoa and fruit trees growing on it.

It is not possible, however, for rules to cover all the different circumstances of different parts, and it would be unfair to place in the same class, holdings of 10 acres or so with holdings of 40 acres, while to make separate classes for holdings over 30 and not over 50, and holdings of one acre and under, would enlarge the competition so that more money would be required for prizes, and so much more time would be taken up in the judging as to incur much expense. We think, however, that it would all be worth the money, as there is no better opportunity for Instructors to find out the most willing and enterprising cultivators and so be able to assist them, than through this competition. But while we think this, and the Board is gratified at the increasing interest exhibited in the competition and at its evident success, still the Legislative Council is conservative and scrutinises proposed further expenditure very closely, and it has to be made very plain that such expenditure will produce good results. The results of the competition so far, have been very gratifying, and very promising of even better results in the future, as we are better equipped than in former years for handling the competition, and competitors understand the rules and conditions better.

THE DIRECT LINE, COMMERCIAL AGENT, ETC.

We have before referred to the great amount of free advertisement that Jamaica, its climate, scenery and productions have received during these past five or six years, particularly and largely through the instrumentality of the Elder, Dempster Company, so far as Great Britain and Europe are concerned. We have paid, of course, a yearly subsidy of £20,000 to Elder, Dempster & Co., for running a line of steamers and carrying mails, (and the Imperial Government has paid another £20.000) between Bristol and Kingston. but that was meant principally to help us towards getting an outlet for our bananas in the United Kingdom—another market besides the United States. We have got that outlet, which we might never have had till this day but for that subsidy (for how many abortive attempts were made with the same object before—we in five years had to deal with two) and the fact that the fruit is also taken under the same auspices to Great Britain from Costa Rica now also, although we may not like it, has very little to do with the question, that the purposes of the subsidy have been served. If Elders & Fyffes had not taken bananas from Costa Rica to the United Kingdom, some other company by this time would have done so. It was first proved that bananas could be taken from Jamaica to Europe successfully, and it was a natural development that a day or two more on the voyage from a place further on would not make much difference. The United Fruit Company now ship bananas easily from Surinam. The particular circumstance that forced this development more quickly than it would otherwise have come about, was the hurricane here in 1903. A fruit company has contracts for fruit to fulfil under penalties, and if bananas could not be got here to carry through the contracts and could be got near by, it was only ordinary commercial enterprise that the bananas would be got rather than penalties be paid and business given up for a time or altogether, at great loss. At the same time some planters here were not treating the English company well; they wanted connection with the United Kingdom, but most were not prepared to sacrifice even a trifle to help a company to overcome the opposition—which although it was not evident still existed—and competition of the United Fruit Company. To suit planters the average price of bananas was first fixed at 1/8 per bunch all the year round and they supplied fruit readily at this price when fruit was plentiful, and the United Fruit Company's scale of prices was under this figure, but the moment the spring came and the prices went up over 1/8, alas! for shortsightedness—the best fruit went to the United Fruit Company and the poorest fruit (?)—often that rejected by the buyers of the United Fruit Company, was sent in to be shipped to England. We have known instances of a planter, who having fruit rejected by the United Fruit Company, simply sent it on to Elders & Fyffes,—who perforce from March to June, had to ship such poor fruit, that the British markets accustomed to the fine

Canary bunches cried out in disgust. Thus commenced the bad name of Jamaica bananas which has had its culmination in large placards shown in the windows of fruit shops in the United Kingdom (such as raised our wrath in 1905 when we saw them)—" *We do not sell Jamaica Bananas—only Canary Bananas sold here.*" Nice sort of thing for a man to see who was taking charge of an exhibition to advertise Jamaica Products! When the hurricane happened—what could Elders & Fyffes do, with contracts with fruiterers to supply bananas! What but turn to Costa Rica to get fruit. There, however, the United Fruit Company held control of the bananas. They had therefore to ask them whether they would supply bananas for them from Costa Rica? Certainly, as a matter of business they would—for a consideration. That consideration was an interest in Elders & Fyffes Company to the extent of 50 per cent. of the shares, we think. There was no help for it. A full supply of bananas could not be had from Jamaica for two years—and so they got their supplies in Costa Rica.

There is always some consolation. It has been proved that bananas can be taken from Costa Rica at a profit, a longer journey than from here, and that a trade in the United Kingdom and Europe too has been created. If this can be done without any subsidy, then we do not require to continue our £20,000 subsidy from a banana point of view. Other things have to be taken into account—quick mail and passenger connection, cheap general freights, and accommodation for shipping oranges. Our orange trade is not now large, but it is important enough to certain parishes to require some consideration. And if Tariff Reform comes to pass, our orange trade with the United Kingdom will at once increase.

Undoubtedly the Direct Line connection has cheapened freights and passenger rates, has quickened the social life of the Island. We all remember the days of the old Royal Mail Company, when you had to humble yourself and beg for shipping facilities. Would this have changed in the course of time of itself without the Direct Line competition. We doubt it. Now the Royal Mail Company is as radical in its enterprise as we could wish. There is no doubt therefore, that the purposes aimed at by our £20,000 subsidy have been fulfilled—Jamaica and its products have been made known and trade can now be left open; there will be plenty we hope to step in if one goes out. Nor need we fear the Great Fruit Trust, for the United States has made laws that prevent great Trusts wiping out smaller competitors by gobbling them up; and if the United Fruit Company were to clear out to-morrow half-a-dozen smaller companies would be glad to rush in. Companies and individuals have all along been trying to get in and always got snuffed out, but since these trust laws referred to have been in operation, small companies have got a footing and are here to stay.

We favoured the idea of Jamaica having a Commercial Agent in London, yet we always had some misgivings. We have not been impressed with the arguments that all that can be done for our trade is being done on the other side by the ordinary dealers in Ja-

maica produce. Our opinion is that nothing at all is being done—in comparison with what our trade rivals are doing. Ordinary dealers in our produce do not confine their trade to Jamaica, or if some few who deal here do not carry on trade elsewhere, they are at any rate too much concerned with individual client's concerns to have time, opportunity, or authority even if they had inclination, to push on business as a whole. We were made very certain, while in the United Kingdom in 1905 in connection with the Exhibition at the Crystal Palace, when we had time and opportunity to concentrate thought and effort on the selling side of Jamaica trade, and when we came into contact with our competitors and learned what they were doing—that there was such a great deal to be done, that it was nearly hopeless for us to think that any of our trade could materially increase in profitable directions without the same organised and systematic effort made on behalf of Jamaica as a whole as our competitors were making. Coffee, Rum, Oranges, Starch, Honey, Preserves and some minor products seemed to offer opportunities for much development—and then there was the protection of our interests as they stood to consider. It ought to have been impossible for any fruiterer to advertise that he did not keep Jamaica bananas. Fancy any fruiterer trying to do the same with Canada or Tasmania apples, or Cape oranges! The Commercial Agent of the countries would have been along in short time to know the reason why and remove the reason if it existed. How many grumbles are there that shippers of oranges do not get fair play from agents in London? Such matters could be settled by inquiry from an independent Jamaica Agent at once. Our misgivings are not as to what can be done on the other side, but what is being done and would be done on this side. We are afraid the Commercial Agent would be worried to death by failures at home, failure to supply products on time, to standard, and in quantity. Yet a good deal of our failures in these directions at present are owing to lack of organisation, and without the Jamaica Agent abroad organisation here would be incomplete. At any rate without such effort as we have spoken about to follow up Exhibitions—it is little use we fear, our taking part in Exhibitions. We have personally spent much effort, much time and taken interest far beyond what we could in the ordinary course of business as Secretary of the Jamaica Agricultural Society, have been called upon to give, in working up Exhibitions on behalf of Jamaica, and the above contains our experiences.

SIR ALFRED JONES.

THE Jamaica Agricultural Society has recorded its profound regret for the loss which Jamaica and the Empire has sustained through the death of Sir Alfred Jones. His efforts on behalf of Jamaica have been much criticised,—as everything and everybody is criticised—but Jamaica has benefitted from its association with Sir Alfred Jones largely. Apart from the Imperial Direct West

India Mail service of steamers, of which he was the moving spirit and which has been referred to in the foregoing article, we are indebted to him for many other kindnesses which have not been appreciated enough. He made great efforts to establish a cotton industry here, and sunk a good deal of money in efforts which have not resulted in much practical result unfortunately, but that was our fault not his. He gave free freight for cotton and cotton seed to foster the industry, and this has been very helpful to those who have struggled to grow cotton profitably, on lands that being too dry, are unfit for most of our staple products, and are very suitable for cotton growing. He gave very cheap passages to Jamaica children at school in the United Kingdom, so that they could return here for their holidays : we regret that we have not seen expressed the appreciation of parents who benefitted by this.

He presented valuable stock to the Island, and the bulls sent out will be of lasting benefit to us. In many other ways not so publicly made we know of kindnesses done to this Island and those in it.

Sir Alfred Jones was a great hearted man and the terms of his last will and testament show this as much as his life did.

WEEVILS.

The life-history of the grain weevil is as follows :—The female beetle eats out a small portion of a grain and deposits an egg there. From the egg hatches a tiny, legless grub, which feeds inside the grain. When full grown the grub transforms into the pupa stage, from which it emerges as an adult beetle (male or female). From the laying of the egg to the adult state occupies about six weeks in summer. The adult stage is lengthy, and the beetle is destrnctive, as well as an egg-producer. In cool districts there are about three generations in a year; in warm districts, six or more broods. Usually only one grub is developed in a small grain, but in corn three or four grubs may develop in a grain.

Store grain in barrels or bins, and keep covered. Occasionally turn up the grain and whenever weevils are noticed, pour a little bi-sulphide of carbon, say a dessertspoonful, into a tobacco tin, place this on the top of the corn, cover over tight. The bi-sulphide is heavier than air and the gas sinks through the grain killing the weevils but not harming the grain. The smell of the bi-sulphide—which is like concentrated essence of dead rat—can be got rid of by simply airing the corn. We often use for fine seeds in place of the small tin, a sheet of blotting paper saturated with the bi-sulphide.

RECIPE FOR RUM SHRUB.

One gallon lime juice 10 gallons rum of 24 bubble—if making a quantity for keeping make rum 22 bubble ; 30 lbs. soft sugar ;

Weigh sugar and then put in the lime juice, allow it to remain for about 6 hours, then with the hands crush all lumps of sugar, get the whole thing into a very thick syrup, then add the rum, but put in *no* water. It is best to make it in a large pail. Leave it for about a day well covered over to keep in strength, then bore the pail about an inch from the bottom, when you will have fine clear shrub. Flavour with sapote seeds or cinnamon.—H. H. PRUDHOMME, St. Andrew, Grenada.

STOCK NOTES.

A CLEANSING DRENCH FOR COWS.—The following makes as good a cleansing drench for cows as can be got. If fever is present ndd Sulphate of Quinine 3 drachms; Cream of Tartar, 2ozs.; Powdered Aniseed, 2ozs.; Powdered Gentian, 1oz.; Powdered Ginger, 1oz.; Sulphur, 2oz.; Epsom Salts; 8ozs.

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HOVEN IN COWS.—Where cattle suffer from hoven or being blown after gorging themselves on fresh grass, the usual remedy is to tap the cow, but this requires some surgical skill. A dose of the following mixture will nearly always give relief:—Oil of Peppermint, 1oz.; Stockholm Tar, 1lb.; Bi-carbonate of Soda, 1lb. Mix well together, open the cow's mouth, pull the tongue forward, and give two teaspoonfuls of the mixture. Keep the remainder of the mixture in stock—it will also relieve indigestion in most stock.

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LICENSE FOR STALLIONS.—In most countries with pretensions in horse-breeding, every stallion standing for service must be examined and passed by a licensed Veterinarian and be licensed and registered for service. The diseases which disqualify a stallion vary slightly in different countries but the following are general: opthalmia (eye-disease) bone-spavin, ringbone, bog-spavin, curb (when accompanied with curbing formation of hock) or any contagious or infectious disease.

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GOATS.—Failure in breeding goats must come about if inbreeding is practised,—if the ewes are old,—if the rams run with the flock, and breed the young ewes before they are old enough,—or breed the older ewes before they are fit for the process,—if they are kept in a flat pen,—(I have my pen on flat rocks)—if rain wets their pen, if the manure is heaped up or not removed—if LICE get at them, or Strongyli—if the same billy or a young ram is used season after season. This last is a common, very common practice. If the kids are kept with the flock, in the pen. If no attention is paid to "scours" (I use the pomegranate mixtnre with marked success). If they do not get water,—a common heresy is that goats don't drink water.—These are good maxims.—CORRESPONDENT.

Rubbing Post for Stock.—An inventor living in Nebraska, has carried the automatic idea to the extent of enabling live stock themselves to apply insecticide, or soothing oils to parts that are irritated or affected by vermin. The invention consists of a rubbing post in which is a reservoir filled with the insecticide, and which may be placed at any suitable place convenient to the live stock. The rubbing post is formed with a central reservoir in which the oil is kept. Between this and the outer casing of the post is a felt-like filling. A wick serves to carry the oil from the reservoir to this filling. The outer casing of the post is perforated so that when the animal rubs against it, the oil will exude from the perforations and be spread upon the affected part.

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Goat Manure.—Sheep and goat manure is generally richer and drier than that from any other domestic animal except poultry and rabbits. It ferments easily, and is classed as a quick-acting manure; but when allowed to accumulate in pens, where it is trampled hard by the animals, it loses some of its value.

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Best Dairy Cows.—A correspondent asks what are the best breeds of milch cows? We would not dare to mention any *one* breed as *the best.*

The four best known dairy breeds of cattle are the Jersey, Guernsey, Holstein, and Ayrshire—these are all of one type, having always been bred for milk. Shorthorns and Redpolls are also used for dairy cattle, but there are three types of these breeds—the beef type, the milk type and a medium type between the two. The Jerseys and Guernseys have been accustomed to much care, gentle handling, and a mild climate for generations. Holsteins belong to a land famous for succulent forage, and whose owners attend to their cows as carefully as to children; the Ayrshires have been particularly adapted to grazing upon short grasses, they have been accustomed to do this in their native land and to an outside life; Shorthorns and Redpolls are great grazers too but require abundant pasturage. The most hardy and economical of these breeds is the Ayrshire. Every breed suits certain conditions of climate and pasturage and certain circumstances of the owner. All those mentioned are British breeds except the Holstein, which is Dutch. But there are also splendid breeds of French and Swiss milch cows.

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Care of the Horse.—When the frog of the horse's foot is kept from contact with the ground, especially if it has been mutilated with a knife, it will dry up and shrivel away, the heels will become narrow and a general contraction of the hoof will ensue. It is a common error to think that the heels should be pared.

Age glides swiftly on and beguiles us as it flies.—Ovid.

BEES.

Spraying Blossoms.—When trees are sprayed while in blossom in Canada, the law requires that the mixture be flavoured with crude carbolic acid. This is to keep bees away, for it is well known that the drug is very offensive to them. If it is necessary to spray while trees are in blossom, which we doubt very much, it would seem that it might be a good idea to have a similar amendment incorporated in our anti-spraying laws. We present the suggestion to our readers for what it is worth. In the meantime we should be glad to get reports from those who may be in position to know whether the carbolic acid sprays, or, rather, spraying liquids flavoured with carbolic acid, will not be touched by bees.—(*Gleanings in Bee Culture, U.S.A.*)

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Nectar.—Nectar is composed of 60 to 80 per. cent. of water, in which cane sugar is dissolved, together with dextrin, mannite, gums, and essential oils, which give the aroma. The amount of nectar in plants is increased after rain, and is diminished in dry weather. For instance, in the fuchsia during showery weather, there are 40 to 70 mm., but after three dry days there would be about 15 mm. The further one goes north from the equator the larger the amount of nectar secreted, and the same takes place in respect to height. The same plants, therefore, in the mountains secrete more nectar than those in the valleys. One floret of red clover contains 7.93 mg. of nectar ; 125 florets therefore produce 1 gramme, 125,000, 1 kilo. Each head of clover consists of about 60 florets, therefore the bees must visit 7,500,000 florets to bring home 1 kilo of nectar. Nectar is produced in the flowers only so long as fertilisation has not taken place, and as soon as this has been accomplished the flow of nectar ceases.

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Making Mead.—Mead or honey wine is a most charming drink, and at the same time, most wholesome. Mixed with soda or other mineral water, it makes a nice refreshing summer beverage. Rather than spoil a trade obtained by selling first-grade honey, use inferior quality in the making of mead. Here is a recipe that will produce a sample equal to others that have taken a gold medal and other special prizes. Put in six gallons of water twenty-four pounds of honey. Boil half-an-hour, removing the scum as it rises. Add three ounces of hops, boil again for fifteen minutes, strain into a cooling vessel, and when luke-warm stir in six tablespoonfuls of brewer's yeast. Let it work twenty-four hours, then remove the head and put into a five gallon cask into which has been put a bottle of brandy and two lemons sliced. Leave out the bung and allow it to work over, filling up with spare liquor. Bung down when working ceases, and bottle in two years. For larger or smaller quantities use the proportions as follows :—1 gallon water, 4 lbs. honey, ½ oz. hops, 1 tablespoonful yeast.

FOUL BROOD IN BEES.

The honey industry is now an important one here and we are fortunate in not having the disease called "Foul Brood," which has caused and is causing much trouble and much loss in most bee-keeping countries of the world, including our near neighbour Cuba.

There is nothing in the bee world at present arousing so much attention, causing so much discussion, and involving so much agitation for legislation as the question of Foul Brood.

We have substantial interests at stake and we ought to safeguard our present immunity. The Board of Management of the Agricultural Society has therefore recommended the prohibition of all bees, used hives, or any part thereof, with the exception of queen bees and their necessary escort, but these attendant bees and the honeycomb used for food, are recommended to be destroyed, and the cage fumigated, fresh comb and a fresh escort being provided. In order to secure this, it is recommended that any one about to import queen bees should give notice to the Hon. Director of Agriculture here, and have them consigned to him to be treated.

In order to show how serious this question of Foul Brood is considered to be we give the following extracts :—

In the *British Bee Journal*, Mr. Reed, at the British Beekeepers' Association conversazione, stated that foul brood "was so prevalent in Northern Italy that bee-keepers took no notice of it." Then follows a discussion as to the advisability of stopping the importation of queens from this country, subjecting the bees to quarantine. As Mr. Reed states that, with foul brood in the hive, the bees were able to put up with it (the disease) and live and produce honey, I should say if this be true by all means get these bees ; but I fancy there is a mistake somewhere. Mr. Reed also states on the same page, "The United States Department of Agriculture were most careful in their regulations to prevent the chance of conveying disease into that country."

The Isle of Wight bee disease appears to have practically wiped out bee-keeping on that island.

The Bureau of Entomology, U.S.A. Department of Agriculture, through its Apicultural Expert, Dr. E. F. Phillips, has suggested that Congress ought to pass a law to control the importation and interstate shipments in bees. Until Congress does take such action the Department of Agriculture is powerless to act. That the Congress will have to exercise some sort of control is generally admitted. At present minor legislation, such as a United States bee-disease-law, will probably be sidetracked to let in something else involving larger interests.

The statement is also made that "foul brood is prevalent in Northern Italy." At the present time there are only very few queens sent from Italy into the United States, and what do come over are in long-distance mailing cages. On arrival into this coun-

try they are introduced into a nucleus or colony and tested to determine their grade.

This detention in the yard of a queen breeder would afford all the quarantine that would be needed to insure safety before sending out to the general trade.

The time will come when we should unitedly ask for a Federal Law to control not only the importation of bees into this country (U.S.A.), but interstate and territorial shipments of them.

The bee-keepers of Kentucky are making strenuous effort to secure some form of foul-brood legislation. Those who know the situation best think it would be impracticable to secure a State-wide foul-brood law, because the legislature would not appropriate the funds sufficient to pay a State-wide inspector, including his necessary expenses. They have, therefore, drawn up a bill that is based somewhat on the county law in Ohio.

This bill, in brief, provides that when petition is presented to the county judge of any county in the State of Kentucky, signed by three or more bee-keepers, stating that certain apiaries within the county are affected with disease, said county judge shall appoint a bee-inspector. Said inspector shall inspect all colonies of bees, hives, and implements, and shall notify the owner if disease is found, and how to cure the same; that if the owner fails or refuses to apply the treatment, the instructor may order their destruction as a nuisance. There are other provisions that usually go with the ordinary foul-brood bill.

The funds for this measure are to be provided by a special tax of five cents for each colony owned in the State. The amount so collected shall constitute a special fund to be disposed of in the payment of the salary and actual expenses of the bee-inspector. It is also provided that said fund can be used in no other way.

The bee-keepers of Massachusetts, Pennsylvania, New Jersey, Maryland, Kentucky, Alabama, Illinois, and Oregon are anxious to have foul-brood laws passed, and, as far as possible, in all these cases the Department has aided the bee-keepers in their efforts.

It will not do, however, for bee-keepers to rely entirely on foul-brood laws to control diseases. An educational campaign to inform the thousands of bee-keepers over the country is badly needed. The Bureau of Entomology is trying to do its share in this work. When a sample of diseased brood is received, a request is sent for names of other bee-keepers near at hand, and they are also sent a circular on brood diseases. Over 10,000 postmasters were also requested to send in the names of bee-keepers in their vicinities during the summer of 1909, and, as far as possible, circulars were sent to the persons whose names were received.

In the matter of treatment, the Bureau, we are advised, has not seen fit to change its recommendation of the shaking treatment. Experiments on the effects of various disinfectants on *Bacillus larvae*

have been performed, and the effects of various drugs in syrup fed to diseased colonies have been studied. The results of some of these experiments are, we understand, to be published this winter. So far the results have not shown that the drug treatments, so much advocated in Europe, are of any value in practical work.—*Gleanings in Bee Culture.*

COMMENTS.

POSTAGE.—Will correspondents please take note that postage *to* this office is *not* free ; only our outgoing postage is free.

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HALF-YEARLY GENERAL MEETING.—The report of this important meeting will appear in March JOURNAL.

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BRANCH SOCIETIES.—Secretaries of local Agricultural Societies should note to send their "Branch Notes" as soon after the Branch meetings as possible. The newspapers will not publish reports of meetings long out of date, nor can we arrange for insertion in the JOURNAL unless we receive the reports before the end of each month. It is no use, for instance, sending in February the reports of a meeting held in December, and asking this to be published in February's JOURNAL, which was already in print. We desire to receive reports of the operations of Branches, but to be of any interest and use they must be sent in when they can be looked upon as current events.

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PUBLICATIONS.—We have printed small pamphlets on "Goats in Jamaica," by the Editor, and on "The Curing of Coffee," by Alfred Walder, Esq., Walderston, Manchester, both being extracted from this JOURNAL and printed for convenience of distribution.

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SEEDS.—Good seed corn will be scarce, but we have made arrangements to stock a supply. There is already a good demand, judging by the bookings. We have a fresh supply of vegetable seed ordered which should be in hand by the time this reaches the eyes of readers. We received in February forty barrels of seed potatoes and in the middle of March we expect another supply for those in the high altitudes to plant where late March and early April planting gives the most profitable results.

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COTTON.—The price of cotton is still keeping up and it is not expected to fall ; bags of West Indian Sea Island cotton have been sold at 1s. 6½d. and 1s. 7d. but there have been some sales at 1s. 8d.

If we have not been obliged to give up banana cultivation, or cocoa cultivation, or even coconuts, because of the troubles we had to contend against through wind, drought or any other cause, why should we be scared at the troubles that beset our first efforts at cotton-growing. This crop was entirely new to us here, yet there has not altogether been a failure in results for those who have ventured into it on a reasonable scale within their ability to manage. We have had the returns from three different cultivations before us for the year 1909, and they have *all* come out with not less than £3 per acre clear profit, in spite of drought,—in fact dry weather is more favourable than wet weather.

A large cultivation which has had every possible expense charged against it except the manager's salary, received for cotton sold £664 13s. 11d., and for seed £77 4d., the total expenses in procuring this result were £424 16s. ½d. The profit works out at about £3 10s. per acre.

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Experiment Ground.—The experiment ground at Top Hill in St. Elizabeth, consisting of one acre of land, has given fifty quarts of red beans and ten bushels, two quarts of good seed corn, the former being worth 6d. a quart and the latter 5/- per bushel. Nearly all the small crops in the same district were spoiled by the heavy rains followed by continued drought. There was no rain after seven weeks' growth until the crops were taken in, and this is sufficient proof that crops grown where the land is well broken and then mulched, will resist the effects of drought. This plot is to be planted out in cassava during February.

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Rubber Tapping.—We have not had very much experience yet in tapping rubber trees, but there are so many trees coming on to an age to tap of both Para and Castilloa, especially Castilloa, that we will require to experiment to get the most effective knife possible. What appears to be an exceedingly practical tapping knife, and one which has been in successful use on a large rubber plantation in Mexico is now being advertised; it is made of iron, the cutting device is exactly adapted for the groove cuts that have been found to be most effective and safe, but in addition there is a gauge attached, which controls the depth of the cuts to a nicety. We are sending for one of these tapping knives for a member of the Society. The cost in New York is $2.50.

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Green Dressings.—We have often recommended Velvet Beans and Bengal Beans for the rampant growth they make, and consequently the large amount of vegetation they provide to cover the soil as a mulch, or be turned into the soil. But there has always been a difficulty in providing for the demand quantities sufficient and at a price that planters could use these legumes largely. We have now in stock sufficient, we think, to let anybody have field trials of these on a large scale.

Next on the list for the amount of green stuff they provide is the Jerusalem Pea. This is a very small pea, a little slow to make a start, but afterwards growing almost as profusely as the Velvet Bean. Then we have Cowpeas as usual.

Every planter whether growing cane or bananas should use green dressings. When a mulch is wanted for protection of the soil against a scorching sun and dry weather, and mulching material is scarce to get and expensive, these green crops will provide the mulching material cheaply. Fertilisers have not proved profitable applied directly to bananas but applied for the leguminous crop they provide for a tremendous growth of vine and more plentiful and deeper feeding roots, and so, indirectly, the bananas may be heavily manured.

Any planter desirous of trying the effect of a suitable fertiliser on the leguminous crop can make a simple test with wood ashes. Apply a barrel of fresh wood ashes to the soil sufficient for a short row of Cowpeas, and then compare the difference of growth on the soil without the wood ashes.

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POULTRY.—We are glad to note that the interest in poultry-breeding increases rather than diminishes; in fact, has steadily increased during these last ten years. The industry of poultry-raising is now in better shape than ever. Like bee-keeping, those who thought it was an easy way of making plenty of money, have discovered that it needs work, attention, experience, and skill, so those who took up poultry-rearing as a fad have dropped it: those who have had energy and perseverance and have kept pegging at it, are finding both pleasure and profit. There have been more importations this season, that is from November 1909, until now, than any year we remember. The last consignment we have got out has been a very good one as it included two pairs of geese,—for the geese of the Island fresh blood has been badly wanted. The following are the importations:—one pair Toulouse Geese and one pair Embden Geese for Godfrey C. Gunter, Mandeville; one Plymouth Rock Cock for Henry Maxwell, Friendship, St. Elizabeth; one Indian Game Cock for J. T. Palache; one Minorca Cock for Jno. Barclay, Kingston; two pens of old English Game Fowls for R. E. Harvey, Negril; two Buff Orpington Hens for J. T. Palache, Mandeville; and two Plymouth Rock Hens, which are for sale as the member who ordered them has had his circumstances altered and cannot now take them.

BRANCH NOTES.

Darliston (Westmoreland).—The quarterly meeting of this Branch was held on Friday, 21st January, at 9 a.m., at the Enfield Schoolroom. There were present: J. W. Mennell, Esq., Agricultural Instructor. R. W. Smith, Esq., Treasurer, and many other members. The minutes of the last meeting were read and confirmed. The Secretary read two letters from the Secretary of the parent Society respecting (1) Prize Holdings Competition; (2) Revised Law on praedial larceny. In answer to (1) the following resolution was moved by Mr. C. J. Stewart, seconded by Mr. J. Harvey and carried by all present: (a) "That this Branch recommends that another

class be created for the Small Holdings Competition. (b) Add another class for holdings over 20 and not over 50 acres, but the Branch deprecates the same premiums being offered as that would lessen the amount of the prizes; but would suggest additional prizes for the extra class. In answer to (2) this Branch nominates the following persons to the Inspector of Police to be authorised under the revised law on praedial larceny, having authority to arrest and deal with suspicious persons, as provided in section 1:—Joseph Williams, Cairn Curran; Charles McKenzie, Ashton; Richard Hibbert, Enfield; Josiah McDonald, DeLeon Bigwoods; Wilfred Thompson, Hopewell; Charles Spence, Lenox Bigwoods; Wilfred Gale, Chilton; John O. Crooks, Lenox Bigwoods; Charles Wilson, Orange Hill; Alfred Burton, Darliston; Ernest Lewis, New Road. After the above nominations the meeting asked the Chairman (J. W. Mennell, Esq.) and the Agricultural Instructor to leave. They did so. The whole meeting then formed into a committee and appointed Mr. C. J. Stewart as Chairman. After having had a lengthy discussion on Mr. Mennell's notice of dismissal, given by the Board of Management, the Committee drew up the following: Resolved "That in the opinion of this Branch of the Jamaica Agricultural Society, the unexpected notice of the dismissal of Mr. H. D. D. Mennell, Agricultural Instructor, has come to us as a shock. That the reasons assigned are foreign to us, as Mr. Mennell's work amongst us for the past three years has given ample satisfaction. That districts that had never been visited before his time have been greatly benefitted by his supervision. That the success of our recent Agricultural Show will testify to this. That he is the right man in the right place. That our fields have greatly improved as an inspection will show. That his removal from our midst at this juncture will be an irreparable loss. That letters received from nearly all the other Branch Societies in his district, positively deny making any "unfavourable criticisms" on his work. That the Board of Management seemed to have lost sight of the immense area traversed by Mr. Mennell and that the amount of work expected of him is impracticable. That Mr. Mennell is so ingratiated with the people that we fear his removal from them just now will cause agriculture to decline in their midst. That while we hail with pleasure the vigilance kept by the parent Society over Instructors, we are unanimous in our opinion that the best results will follow if a further trial be given him, now that the Instructor's district is considerably lessened."—(Signed) Joseph Stewart, James Harvey, Joseph Leslie, C. J. Stewart, Alfred Spence, Henry Smith, William Smalling, A. L. Levy, Joseph Williams, R. Hibbert, G. Scott, R. W. Smith, James Levy, P. James, Thomas Harvey, D. E. Thompson, J. H. Hedley and many others. Meeting adjourned to Friday, 15th April, at 9 a.m. at the usual place.—J. H. Hedley, Secretary.

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Troja (St. Catherine).—A special meeting of this Branch was held on the 13th January, at 6 p.m. In spite of the inclement state of the weather there were nearly thirty members present as well as a few strangers. The Board of Management should have met at 3.30 on the same evening, but owing to the rains the members did not all assemble in time and so it was postponed. The special meeting was convened for the purpose of hearing a lecture by Mr. Arnett on the "Care and Management of Live Stock." Both Mr. Hirst and himself were present. A brief explanation was made by the President, after which he invited the lecturer to the floor. Mr. Arnett in his turn made a few remarks in which he complained of the vagueness of the subject on which he was asked to lecture. He said that the term "Live Stock" was a very comprehensive one, but as he was left to choose he had singled out a section—"The care and management of horses," on which he would speak. He spoke lengthily on the feeding, cleaning and shoeing and working of these animals. Special reference was made to the way in which horses repay the care lavished on them. The lecture was masterly given. This was obviously seen by the keen in-

terest evinced on the part of the audience throughout its entire course. At the completion of the lecture the members were invited to question the lecturer on any point that may not have been quite clearly understood. Mr. A. Vivian Hagues set the ball a-rolling and quite a considerable number of questions were asked, all of which were satisfactorily answered. Mr. A. Gardner spoke in eulogistic terms of the lecture, and in conclusion moved a vote of thanks, which was seconded by Mr. A. McNeill. To this the lecturer suitably replied. The President expressed the hope that this would not be the last visit to the Society by Mr. Arnett and that his next visit may be in the near future. At this stage the Secretary distributed to the members booklets dealing with the fungus diseases of cocoa, and placards and prize lists of the St. Faith's Agricultural Show, to be held at Glengoffe. Two new members were next enrolled, and the meeting was adjourned.--A. VIVIAN HAGUES, Assistant Secretary.

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Stewart Town (Trelawny).— A meeting of this Branch took place on December 23rd. Before the meeting was proceeded with, Messrs. Levy and Arnett, Agricultural Instructors, John Stockhausen, Albert Bernard and the Secretary met to complete the Prize List to submit it to the meeting for its approval. The meeting began shortly after 7 o'clock, Mr. Johh Stockhausen in the chair and a large number of members were present. The minutes of the last meeting were read and confirmed. A letter was read from Mr. John Barclay dated 1st December, 1909, calling the attention of the Branch Societies to the revised law on praedial larceny. Some discussion arose on this point and Mr. Arnett explained the provisions of the law. The meeting then proceeded to nominate one of the members to be recommended to the Inspector General of Police to be authorised under that law. Mr. James Campbell was unanimously elected and he will be recommended to the Inspector General to be authorised. Other matters were dealt with and the meeting terminated.—JOSIAH JOHNSON, Secretary.

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Troja (St. Catherine).—On the 27th January, a very interesting meeting of this Branch was held. The Board of Management met an hour before the regular meeting on the same evening. The President being absent the Rev. T. H. Grant, one of the Vice-presidents, took the chair. There were thirty-one members present Mr. A. McNeil, the other Vice-president, came in when the meeting had well nigh reached its middle. The minutes of the last meeting were read and confirmed, after a slight amendment had been made by the presiding officer, on the suggestion of Mr. Ferguson. A letter from Mr. Jno. Barclay containing information regarding a good pig, was read by the acting Secretary. No preparation was as yet made for the reception of the required pig, hence no decided step could be taken. A letter was also presented at this meeting from the Secretary of the St. Faith's Branch Society in which the members of this Society were invited to compete in the approaching Show of that Society. A short but interesting lecture was then delivered by Mr. Thomas Hammond on the cultivation of canes, at the close of which quite a flood of questions was poured on him from all sides, most of which were clearly answered. A vote of thanks, moved by the Rev. T. H. Grant and seconded by Mr. M. Goodison, was accorded the lecturer. Towards the close of the lecture Mr. A. McNeil, who had been absent came in, and after all questions had ceased, the presiding officer signalled him to address the meeting. "He was present," he said, "at the half-yearly general meeting of the parent Society. and though not a representative, yet he felt it his duty to give a short account." He spoke briefly of what took place there, and showed how any representative with a grievance would be patiently listened to. The speaker concluded with some very encouraging remarks which were received with vociferous applause. Mr. McNeil next handed to the acting

Secretary the resignation of Mr. Wm. O'Hara, former Secretary of the Society. This was read and accepted. It was requested of the acting Secretary to write the resigning officer expressing the Society's high appreciation of his short but active time of service and its regret in losing him. The meeting next proceeded to elect a Secretary, when Mr. A. Vivian Hagues was elected by unanimous vote. He made a short address in which he declared himself to be keenly interested in the Society, and pledged to serve it as far as in him lies. The appointment of Mr. Hagues made a vacancy in the Assistant Secretaryship. but on motion of Mr. McNeil, it was determined to leave the post unfilled till the next meeting. Mr. William Ferguson suggested that the Rev. H. B. Walcott of Richmond, be written to requesting him to give a lecture at the next regular meeting of the Society, on the cultivation of vegetables, the section to be of his own choosing. This was approved of by all the members then present. It was next decided that the rules drafted by the Board of Management should be submitted at the next regular meeting. Three new members were enrolled and the meeting was adjourned to meet again on the 24th February.—A. VIVIAN HAGUES, Secretary.

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Upper Metcalfe (St. Mary).—The regular monthly meeting of this Society was held on the afternoon of the 20th January, in the Brainerd Schoolroom. The weather was threatening and the roads bad, but in spite of all forty-seven members were present. The meeting was also favoured with the presence of W. Cradwick, Esq., Travelling Instructor. The President, Mr. Abrahams, presided and after the reading of the minutes, a letter was read from the St. George Branch of the Agricultural Society, asking for the co-operation of this Branch in the getting up of a monster Agricultural Show to be held at Buff Bay on August 1st, 1910. Mr. Cradwick then spoke on the subject, and it was agreed that this Branch would do all in its power to make the Show a success. A letter was read from Mr. Toyloy on the subject of having an office for the registration of births and deaths established in the district. After Messrs. Abrahams, Cradwick, Schleifer, and the Rev. A. N. Shirley had spoken on the subject, the following resolution was carried and the Secretary was directed to forward it to the Registrar General:—"That it is the unanimous opinion of the members of this Society, representing nearly 100 taxpayers, that an office for the registration of births and deaths for the Brainerd and surrounding districts in the parish of St. Mary, is highly necessary, the nearest offices Richmond, being seven miles away and Mt. Regale, eight miles away, and that the Registrar General be respectfully asked to take steps for providing such an office as early as possible." Mr. Cradwick, at the request of the Secretary, then lectured upon "Coconut Diseases," suggesting preventive and remedial measures. Several questions on various subjects were asked the lecturer and answered to general satisfaction. A hearty vote of thanks was accorded Mr. Cradwick and the hope was expressed that he would soon take up residence nearer to us. Members were then invited to attend the demonstrations upon diseased cocoa trees which would be carried out by Mr. Cradwick in Mr. Schleifer's cultivation on the following day. The Treasurer presented his report, and handed in one year's subscription to *Tropical Life* to Mr. Cradwick, in accordance with directions given at the last meeting. At the roll-call it was reported that Peter Tennent, a member of the Society, had died a few days ago. Regret was expressed. The following new members were elected: Thomas Davis, Thomas Mitchell, Charles Maillette, Alexander Reid, and Robert Johnson. The meeting adjourned.—SAML. A. SCHLEIFER, Secretary.

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Portland Central (St. Margaret's Bay).—A meeting of this Branch was held on the 18th December. Several members were present, including the Rev. P. A. Conahan (in the chair), Messrs. W. Cradwick, Travelling

Instructor and R. A. Henry, Secretary. Two new members—Messrs. J. Dunn and W. Rennie—were added to the list. Dr. F. G. Grossett and J. H. Smith of Hope Bay, were also nominated members of the Society. The Society is still pushing its claims on the Government for better roads in Portland. A driving road up the Rio Grande Valley is badly needed, and steps are being taken to work up this requirement. Members of the Mount Pleasant, Panton, Industry Rock Hall, Burnsridge and Fruitful Vale Branches are pressing their rightful claim through the Society, for a driving road through these places. The Hon. A. A. Brown is encouraging the planting of more bananas and we sincerely hope that he will strongly advocate the opening up of roads in these remote places for aiding in the disposing of these fruits. The Instructor has been visiting the districts around during the week, and at the meeting he gave some valuable hints and suggestions on the Prize Holdings Competition, the Praedial Larceny Law, the manipulation of vegetable seeds before planting. He also spoke on the Government Farm School at Hope. Mr. J. S. Williams spoke on the great necessity for a Justice of the Peace at St. Margaret's Bay, the centre of several of the outlying districts. Other matters were dealt with and the meeting adjourned.—R. A. HENRY, Secretary.

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St. Faith's (St. Catherine).—A special meeting of this Branch was held in the Grateful Hill Schoolroom on the 18th January, 1910. There were nearly a hundred ladies and gentlemen present. In the absence of the President, Alex. Carey, Esq., the Rev. T. M. Serlock, Vice-President, presided. The Prize List for the coming Show to be held on the Glengoffe race-track on the 17th March, was carefully discussed. It was pointed out by some members that some articles such as tobacco, had been omitted. The Secretary explained that such articles if placed on exhibition and are deserving, will receive extra prizes according to the state of the Show fund. Various questions were answered bearing on Show matters. The Secretary was next asked to speak and confined his attention to giving hints to intending exhibitors, finally urging all present to bring exhibits, and by means of the Show to make a reputation for the Society and the community. A letter was read from Mr. Clifford Saddler in which he offered a prize of 10/- for the best specimen of a lady's jippi-jappa. The Secretary was unanimously elected to represent the Branch at the half-yearly general meeting in Kingston on the 20th January. A Committee was appointed to draft resolutions for that meeting, consisting of Rev. T. M. Sherlock, Messrs. W. F. Vassall, T. A. Thomas, F. Campbell, W. Gabay and the Secretary.—A. P. HANSON, Secretary.

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(Pedro, St. Ann).—The regular fortnightly meeting of the Pedro Branch Agricultural and Improvement Society was successfully held on Thursday, 2nd December. The minutes of the last meeting were read by the Assistant Secretary and confirmed, after which the Secretary read correspondence from Messrs. Arnett and Barclay. A discussion followed on Mr. Barclay's letter *re* Prize Holdings Competition, after which it was decided to inform Mr. Barclay that this Society was of opinion that it would be expedient to have another class of holdings including 20 to 50 acres. Mr. Arnett's proposed visit was also hailed by every one, which will be from the 14th to the 17th December. Mr. W. J. Francis gave an elaborate paper on the "Handling and Curing of our Produce." Too much can not be said of the fine style in which the supporters in the debate "Should our people Emigrate?" which next followed, acquitted themselves. Miss I. J. Fletcher, supporter of emigration, displayed the climax of her rational capabilities in this debate. She supported emigration for the following reasons: (1) when one emigrates, he becomes enlightened and his social conditions are improved; (2) promotion is always got by one's emigration; (3) it is an education in itself; (4) it tends to the

betterment of our lives; some emigrants spread good influences over the places they sojourn. Dealing with the above points she referred to such emigrants as Ruth, Buxton, Wilberforce, Stanley; also the Pilgrim Fathers, and many of the rising sons of Jamaica now abroad, that are uplifting the name of the Island by their marked achievements. Miss Lilian Francis the opposite side's supporter, next took her turn to support: "Why our people should not emigrate." She was rather emphatic on the following points, and did her best to instil in the minds of all present the benefits of staying on the farm: (1) Some people emigrate from laziness, and the belief that money can be easily got elsewhere; (2) also namby-pamby men who have no grit, determination, energy or patriotism emigrate; (3) emigration spoils the reputation of Jamaica; (4) it is the means of propagating various diseases; (5) nearly all emigrants desecrate the Lord's day; (6) with an amount of industry, thrift and intelligence, also a determined effort, everyone can make progress at home. In concluding she urged the necessity of becoming heroes for our country and a fondness for patriotism in the people of our island. After an interesting debate, the President summed up both arguments and put it to the vote by ballot. On counting the votes the supporter for emigration won by a majority of five votes, having got 13 votes against eight for the supporter of the opposite side. A hearty vote of thanks was proposed, seconded and carried for the two supporters.—A. GEOFFREY SMALL, Assistant and Reporting Secretary.

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Albany (St. **Mary**).—This Branch met at Islington on January 27th, 1910. There were present: Messsrs. L. Clark (Vice-president), J. Robins, Jas. Robins, R. Reynolds, J. Shay, P. Henry, Henry Robins, W. Cradwick (Agricultural Instructor), C. A. Wilson (Secretary) and Miss L. Wilson. The minutes of last meeting were read and confirmed. The following were elected members of the Branch: Hon. R. P. Simmonds, Messrs. Jos. Williams, F. A. Chamberlain, William Thompson, I. Robinson, J. McFarquhar, William Reynolds, J. Leslie, P. McLaughlin, Jas. Heslop, Wm. Forrest, G. Turner, C. D. Matthews, I. J. Powell, Wm. Morris, R. Young and Alfred Henry. The Hon. R. P. Simmonds was unanimously elected President and Mr. Clarke retired in his favour. The appointment was considered of authorised persons in connection with the Praedial Larceny Law. Members were asked to propose names of suitable persons at next meeting. It was decided to start a hat-making class as soon as twenty or 25 applicants came forward. Arrangements were left in the hands of Mr. Cradwick and the Secretary. It was also decided to send exhibits from the Branch to St. George's Show in August. The meeting was strongly of opinion that a St. Mary's Show ought to be held this year. It was agreed that a meeting to make necessary arrangements, be held in Richmond on the 11th prox. The state of the parochial roads were considered and it was agreed to ask the Board to raise the road from Friendship to Cove to first class and to take over portion of road passing through Friendship Mountain and Pimento Hill. The meeting was of opinion that a post office should be established at Islington and it was agreed to make an effort to get this. Mr. Cradwick spoke on cocoa diseases and impressed the need for burning and burying broken and diseased pods. A vote of thanks was given to Mr. Cradwick. The meeting adjourned to meet at Martin's Schoolroom on Wednesday, 16th March, at 2 p.m.—C. A. WILSON, Secretary.

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Porus (Manchester).—Secretary's report of the Porus Branch Agricultural Society for the year ending 1909.—Chairman and members of the above-named Branch, I am glad to say that, in presenting my report, we have no reason to be discouraged, though at some meetings the attendance was very bad. I am now able to state that we have an increase of mem-

bers to that of last year. Financially, according to the Treasurer's report, we have to our credit £4 4s. 4d. We were able to hold during the year eleven regular meetings, one special and two committee meetings. Our President went to Scotland on furlough during the year and the Vice-president, S. A. Hendricks, Esq., J.P., M.P.B., took the chair and carried the work through until he (the President) returned. We had the Instructor during the year at three regular meetings and he attended several of the Show Committee meetings and rendered us valuable service, he also gave us fourteen articles of literature on agriculture which we have decided to lend to members, also three articles of literature on agriculture from Mr. Henricksen of Cuba, and some from the Department of Agriculture which have been distributed among members. We were able to carry through our second Show to a very successful end with the aid of our Instructor J. T. Palache, Esq., J. Barclay, Esq., Secretary of the parent Society and J. Hirst, Esq., along with our energetic Secretary and hard working Committee and other ladies and gentlemen. We are willing to work in harmony with the Kendal Show Committee and are in accord with the suggestion of our Instructor and His Excellency the Governor, that one year the Show can be held at Porus and the other at Kendal. We also desire to point out that we have been greatly indebted to G. A. Bonitto, Esq., for his valuable help at both of our Shows ; his advice has been sought and willingly given as well as other gentlemen and ladies in and around Mandeville. We tender our hearty thanks to the press for the interest shown in reporting fully the prize list and appreciate the fact and willingness to help the Branch Societies by publishing articles of interest at various times.—C. Rowland, Secretary.

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Springfield (St. James).—The annual meeting of this Branch came off on the 28th January, 1910. Present: Rev. J. A. Jones. President in the chair; Messrs. Andrew Hall, D. N. Henry, Samgel Leach, William Leach, Edward Perkins, J. Shaw, D. Drummond, Secretary and one visitor. The Treasurer, J. Jacob Irving, Esq., was unavoidably absent. The President then addressed the meeting in his usual pleasant and instructive style. Minutes of the last meeting held on 4th June, 1909, were read and confirmed. Officers for 1909 were thauked for their services and the reelection resulted as follows:—Rev. J. A. Jones, President, J. Jacob Irving, Esq., Treasurer and Vice-president, Andrew Hall, Esq., M.P.B., Vice-president, Edward Perkins, Esq., Assistant Secretary, D. E. Drummond, Esq., Secretary. The Executive Committee remained the same with the addition of Mr. D. N. Henry. The Secretary was asked to write the General Secretary to enquire if the resolution regarding the injustice done by the Fruit Combine at Montego Bay to the growers was received, and to ask what steps were taken by the parent Society to remedy this evil. The Praedial Larceny Bill was next discussed. The meeting agreed with the Government measures that persons who suffer from thieves should be compensated by inflicting a fine when the thieves are convicted if they are able to pay, otherwise imprisonment. The need of a J.P. for the district of Springfield was next discussed. The Secretary was asked to write the senior J.P. for the parish on the matter. The Secretary was instructed to write Mr. Barclay concerning the visit of the Travelling Instructor, Mr. H. Q. Levy, and to send a copy of his itinerary so as to let the Society know when to expect him. The members were encouraged and advised to do something towards the coming Montpelier Show so as to make it a success. The President spoke of the good he got from the monthly Journals and advised the members to read them as they are full of great interest, especially about horses, cows and poultry. *Re* the Prize Holdings Scheme for an acreage of over twenty. The meeting was of the opinion that a person owning over twenty acres up to fifty, should be allowed to compete for the Prize Holdings Competition by taking five, ten or twenty acres as other ordinary competitors. The Secretary was asked to send

November and December JOURNALS as members have not got them. The President moved that it gave him great pleasure to have with them one of the members—Mr. Andrew Hall, who is now a member of the Parochial Board of St. James. This was agreed to. Mr. Andrew Hall replied thanking the meeting for the respect shown him and pledging himself to serve his constituents to the best of his ability. Mention was made of the death of the Angora goat which was purchased for the use of the Society. Mr. E. Perkins moved that instead of a quarterly meeting there should be a monthly one. Mr. A. Hall seconded the resolution. This matter was discussed fully. The President ruled that the Secretary be advised to inform the members of any matters of importance and a meeting be called. This was agreed to. Also the Secretary be empowered to place on the agenda anything that in his opinion, is of public interest to the Society and members having anything they would like to have discussed, may communicate with the Secretary and a meeting be convened at any time, provided it is not longer than three months. The Secretary was asked to write the members reminding them that their subscription is now due. The Secretary was requested to write the companies showing the disastrous effect the fruit combine had on the growers. The meeting adjourned with a feeling that a very enjoyable time was spent.—D. DRUMMOND, Secretary.

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Trinity Ville (St. Thomas).—The general annual meeting of this Branch was held on the 7th January, 1910, in the Church of England Schoolroom. Present: W. A. Carr, President, J. T. Edman, Secretary, twenty-two other members and one visitor. The minutes of the last meeting (October) were read and confirmed. The Secretary reported that owing to the severe rains, no meeting was held in November and the December one fell through for want of a quorum. The Secretary read report on loan grant, which showed that £15 was loaned to members for six months. The President and Mr. Edwards moved its adoption—this was carried. The Secretary read his annual report for the year ended 31st December, 1909. This was adopted on motion of Messrs. Wisdom and D. Grant. As arising out of the report, Mr. J. A. Telfer asked why the cocks were not purchased, and on getting a suitable reply it was decided to again instruct Mr. Briscoe to purchase same. Mr. D. Grant commented on the report. The Treasurer was not present, neither did he send his report; a vote of censure was passed on him, and that his report be presented at their next meeting. Subscription was received from fifteen members. The following were enrolled as new members:—Messrs. Jas. Walker, Ed. Douglas, Nathaniel A. Blake, Henry Bogle, D. Beckford, C. E. A. Roberts and Mrs. J. Surgeon; the first four names sent by the Rev. E. Mowl. The President then gave his retiring address. Reviewing the year's work and commenting on the good the Society is to the community generally, mentioning such points as the recommendation of a trained nurse, loan to members, etc. Mr. Carr was re-elected President, Mr. Edman Secretary; Mr. Whitfield and Mr. Grant, were elected Vice-presidents. The following are the Managing Committee:—Messrs. J. O. A. Ross, F. A. Stewart, J. A. Telfer, T. Kelly, W. T. Hall, J. F. Anderson, E. S. Edwards, L. Burgher, W. G. McLean and Jas. Spleen. Correspondence was next dealt with. Mr. Barclay wrote of the Government's intention to supply seeds to the stricken districts through the recent flood. This was approved of. The President moved, seconded by Mr. Kelly and unanimously carried: "That £1 1s. from the funds of the Society, be given towards the sufferers." It was further agreed that the donation should be augmented by individual subscription and that the amount be forwarded to the *Gleaner* Fund. The Praedial Larceny Law and Prize Holdings Competition were deferred to a special meeting, when the distribution of prizes won in the Prize Holdings Competition, will take place. The meeting then adjourned.—J. T. EDMAN, Secretary.